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     FILE 'HCAPLUS' ENTERED AT 16:41:30 ON 24 NOV 2008
L1        68019 S POLYSACCHARIDE
L2        11051 S (TYPE 5) OR CAPSULAT
L3        18409 S (TYPE 5) OR CAPSULAR
L4         3525 S PNEUMOCOCCUS
L5         4703 S L1 AND (L4 OR L3)
L6          297 S L1 AND (L4 AND L3)
L7          250 S L6 AND (PY<2003 OR AY<2003 OR PRY<2003)
L8      1540559 S MICROWAVE OR PH
L9           14 S L7 AND L8
L10           0 S REDUCTINVE AMINATION
L11        7825 S (REDUCTIVE AMINATION) OR CYANOBOROHYDRIDE
L12           0 S L7 AND L11
L13          37 S L1 AND (L3 OR L4) AND L11
L14          28 S L13 AND (PY<2003 OR AY<2003 OR PRY<2003)
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FILE COVERS 1907 - 24 Nov 2008  VOL 149 ISS 22
FILE LAST UPDATED: 23 Nov 2008  (20081123/ED)

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reclassification data for the third quarter of 2008.

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> s polysaccharide
L1       68019 POLYSACCHARIDE

=> s (type 5) or capsulat
       1986819 TYPE
       6857006 5
         11050 TYPE 5
                 (TYPE(W)5)
             1 CAPSULAT
L2       11051 (TYPE 5) OR CAPSULAT

=> s (type 5) or capsular
       1986819 TYPE
       6857006 5
         11050 TYPE 5
                 (TYPE(W)5)
          7450 CAPSULAR
L3       18409 (TYPE 5) OR CAPSULAR

=> s pneumococcus
L4        3525 PNEUMOCOCCUS

=> s l1 and (L4 or L3)
L5        4703 L1 AND (L4 OR L3)

=> s l1 and (L4 and L3)
L6         297 L1 AND (L4 AND L3)

=> L6 and (PY<2003 or AY<2003 or PRY<2003)
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L6 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s L6 and (PY<2003 or AY<2003 or PRY<2003)
      22961900 PY<2003
       4500211 AY<2003
       3968587 PRY<2003
L7          250 L6 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> s microwave or pH
        134767 MICROWAVE
       1408158 PH
L8     1540559 MICROWAVE OR PH

=> s l7 and l8
L9           14 L7 AND L8

=> d l9 1-14 ti abs bib

L9   ANSWER 1 OF 14  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Synthesis of a conjugate vaccine composed of pneumococcus type
     14 capsular polysaccharide bound to pertussis toxin
AB   Type 14 is one of the common types isolated from patients of all ages with
     infections caused by Streptococcus pneumoniae.  Its capsular
     polysaccharide (Pn14) is composed of a neutrally charged
     tetrasaccharide repeat unit.  Pn14 does not elicit protective levels of
     antibodies in infants and children and is a less than optimal immunogen of
     the 23-valent vaccine for adults.  Pertussis toxin (PT) is both a
     virulence factor and protective antigen of Bordetella pertussis: it is not
     soluble at neutral pH and forms insol. complexes with acidic
     polysaccharides.  Both Pn14 and PT are potential components of vaccines
     for infants and children.  Accordingly, a synthetic scheme was devised to
     prepare a conjugate of Pn14 and PT.  An adipic acid hydrazide derivative of
Pn14
     was bound to PT at pH 3.9 by carbodiimide-mediated condensation.
     The conjugation procedure inactivated the PT as assayed by CHO cell and
     histamine-sensitizing activity.  The Pn14-PT conjugate elicited antibodies
     in mice to Pn14 at levels estimated to be protective in humans and elicited
     neutralizing antibodies to PT.
AN   1993:37207  HCAPLUS <<LOGINID::20081124>>
DN   118:37207
OREF 118:6759a,6762a
TI   Synthesis of a conjugate vaccine composed of pneumococcus type
     14 capsular polysaccharide bound to pertussis toxin
AU   Schneerson, Rachel; Levi, Lily; Robbins, John B.; Bryla, Dolores M.;
     Schiffman, Gerald; Lagergard, Teresa
CS   Lab. Dev. Mol. Immun., Natl. Inst. Child Health Hum. Dev., Bethesda, MD,
     20892, USA
SO   Infection and Immunity (1992), 60(9), 3528-32
     CODEN: INFIBR; ISSN: 0019-9567
DT   Journal
LA   English

L9   ANSWER 2 OF 14  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Multivalent pneumococcal vaccine and preparation thereof
AB   A multivalent pneumococcal vaccine, comprising immunolog.-active purified
     pneumococcal capsular polysaccharide (substantially
     absent C4 polysaccharide) of the types 1, 2, 3, 4, 5, 6B, 7F, 8,
     9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19A, 19F, 20, 22F, 23F, 33F
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(Danish designation) is prepared using a series of purification steps. Thus, a Pneumococcus type 3 fermentation lysate is precipitated with 0.15-0.5 volume alc.
at pH 6.7 and 2-6°, and redissolved in 4% NaAcO. The process is repeated twice, using 0.25-0.6 and 0.1-0.5 volume alc., resp. Impurities are further removed by fractional precipitation with 0.1-0.5 vol % cetavlon (based on 10% cetavlon solution), at pH 7.4 and 21-25°. The polysaccharide is repptd. at pH 6.7 and 4° with .apprx.4% NaAcO and .apprx.0.5 volume alc., and this step is repeated twice. The polysaccharide is dissolved in pyrogen-free water and the solution is adjusted to pH 6.1 with 0.3M HAcO. NaCl is added to 0.15M concentration and activated charcoal is added to 5% concentration, followed by filtering, dialysis, freezing and lyophilizing, to give an immunogenic product free of proteins and nucleic acids.

AN 1986:49841 HCAPLUS <<LOGINID::20081124>>
DN 104:49841
OREF 104:8033a,8036a
TI Multivalent pneumococcal vaccine and preparation thereof
IN Ritchey, Mary B.; Cano, Francis R.; O'Hara, Gerald J.; English, James D.; Lin, Wenlii
PA American Cyanamid Co. , USA
SO Eur. Pat. Appl., 63 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 157899	A2	19851016	EP 1984-105559	19840516	<--
	EP 157899	A3	19870909			
	EP 157899	B1	19920617			
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE					
	US 4686102	A	19870811	US 1984-599318	19840412	<--
	CA 1216235	A1	19870106	CA 1984-455036	19840524	<--
	JP 60218325	A	19851101	JP 1984-155729	19840727	<--
	JP 06041422	B	19940601			
	AU 8541016	A	19851017	AU 1985-41016	19850411	<--
	AU 569946	B2	19880225			
	ZA 8502724	A	19851127	ZA 1985-2724	19850411	<--
	AT 399655	B	19950626	AT 1985-1090	19850411	<--
PRAI	US 1984-599318	A	19840412	<--		

L9 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Modification of a direct enzyme-linked immunosorbent assay for the detection of immunoglobulin G and M antibodies to pneumococcal capsular polysaccharide
AB In contrast to the usual indirect ELISA method for detection of antibody responses, a modified direct ELISA technique was used to measure IgG and IgM responses to pneumococcal capsular types 1, 3, 9N, and 23F in humans. Individual capsular polysaccharides were covalently bound to poly-L-lysine before adsorption to the solid phase. The coupling reaction was enhanced by maintenance of a constant pH of 8.2 after the addition of all reactants. The evaluation of 4 diluents [phosphate-buffered saline (PBS)-Tween; PBS-Tween plus 10% fetal calf serum; PBS-Tween plus 10% bovine serum albumin; and PBS-Tween plus 20% normal goat serum] showed that the sensitivity and specificity of the assay was increased with normal goat serum (10-fold). Serum samples from subjects immunized with polyvalent pneumococcal vaccine were tested by direct ELISA and by radioimmunoassay. At 4 wk postimmunization, the ELISA method showed that IgG was the predominant antibody and the IgM responses

were lower or had diminished. Isotype shifts during this period would have been undetected by the radioimmunoassay method. The changes in antibody response measured by ELISA were comparable to the radioimmunoassay results. The direct ELISA method for the detection of antipneumococcal capsular antibody is a sensitive and reproducible assay for the detection of IgG and IgM antibodies.

AN 1985:129995 HCAPLUS <<LOGINID::20081124>>
DN 102:129995
OREF 102:20377a,20380a
TI Modification of a direct enzyme-linked immunosorbent assay for the detection of immunoglobulin G and M antibodies to pneumococcal capsular polysaccharide
AU Messina, J. P.; Hickox, P. G.; Lepow, M. L.; Pollara, B.; Venezia, R. A.
CS Albany Med. Coll., Union Univ., Albany, NY, 12208, USA
SO Journal of Clinical Microbiology (1985), 21(3), 390-4
CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English

L9 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Hydrolytic stability of pneumococcal group 6 (type 6A and 6B) capsular polysaccharides
GI For diagram(s), see printed CA Issue.
AB The hydrolyses of the immunol. cross-reactive and constitutionally isomeric group 6 pneumococcal polysaccharides, types 6A and 6B with repeating units I (R = 5-phosphoribos-3-yl and 5-phosphoribos-4-yl) resp., were studied by 31P NMR spectroscopy, gel filtration through Sepharose 4B, reducing-sugar anal., and rocket immunoelectrophoresis. 31P NMR spectroscopy showed that cleavage of the repeating-unit phosphodiester linkages at pH 10 and 60° was considerably faster (>103) for the type 6A than the type 6B polysaccharide. 31P NMR kinetic measurements showed that the Na+ form of the type 6A polysaccharide underwent phosphodiester-linkage hydrolysis 2-fold slower than the corresponding Ca+2 form; a stoichiometric excess of Ca+2 caused a 30-fold enhancement of the rate of hydrolysis of the latter. Heating the polysaccharides at 56° for various times led to a considerably faster decrease in the size of the type 6A antigen than of the type 6B antigen (as measured by gel filtration coeffs. of distribution, Kd values). The Kd values for size reduction correlated with the loss of immunochem. reactivity (measured by rocket immunoelectrophoresis). The kinetics of depolymn. of the polysaccharides was consistent with random bond cleavage. The acetal linkages of the type 6A and 6B polysaccharides were comparatively resistant to hydrolysis; depolymn. by hydrolysis of the phosphodiester linkage was a major factor only in the type 6A. Probably, the hydrolytic stability of the type 6B antigen would favor its use in polyvalent pneumococcal vaccine rather than the cross-reactive, but comparatively unstable, type 6A polysaccharide.

AN 1982:508295 HCAPLUS <<LOGINID::20081124>>
DN 97:108295
OREF 97:17998h,17999a
TI Hydrolytic stability of pneumococcal group 6 (type 6A and 6B) capsular polysaccharides
AU Zon, Gerald; Szu, Shousun C.; Egan, William; Robbins, Joan D.; Robbins, John B.
CS Dep. Chem., Cathol. Univ. America, Washington, DC, 20064, USA
SO Infection and Immunity (1982), 37(1), 89-103
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English

L9 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Countercurrent immunoelectrophoresis: improved detection of pneumococcal capsular antigens in sputum by incorporation of a carboxylated derivative of phenyl boronic acid
AB Incorporation of m-carboxyphenylboronic acid (mCPB) into a 1% agarose gel support prior to countercurrent electrophoresis with a barbital buffer increased number of sputum samples registered as pos. for pneumococcal polysaccharide types 7 and 14 by countercurrent immunoelectrophoresis. The most drastic improvement occurred when the electrophoresis was carried out at pH 8.6 and precipitation allowed to occur during overnight refrigeration. The improvement in sensitivity is attributed to improvement in the anodal migration ability of the normally elec. neutral type 7 and 14 capsular polysaccharide by binding with mCPB.
AN 1980:39544 HCAPLUS <<LOGINID::20081124>>
DN 92:39544
OREF 92:6611a,6614a
TI Countercurrent immunoelectrophoresis: improved detection of pneumococcal capsular antigens in sputum by incorporation of a carboxylated derivative of phenyl boronic acid
AU Kelsey, M. C.; Reed, C. S.
CS Dep. Clin. Pathol., Univ. Coll. Hosp., London, WC1E 6AU, UK
SO Journal of Clinical Pathology (1979), 32(9), 960-2
CODEN: JCPAAK; ISSN: 0021-9746
DT Journal
LA English

L9 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Immunochemical studies on equine immunoglobulins. Part VI. Combining site specificity of antipneumococcal type VIII horse immunoglobulins cross-reactive with mild acid-treated Xanthomonas campestris polysaccharide
AB Following mild acid treatment (pH 1.1 for 1 h at 100°), the extracellular polysaccharide of X. campestris (NRRL B-1459) acquires a weak cross-reactivity with horse antipneumococcal type VIII (anti-Pn VIII) serum. The interaction of mild acid-treated xanthomonal polysaccharide with anti-Pn VIII was examined by quant. precipitation and hapten inhibition and compared with data similarly obtained for oat glucan. Igs isolated by a cellobiose-strong salt extraction of specific ppts. formed by anti-Pn VIII with xanthomonal antigen, oat glucan, lichenin, and types III and VIII Pn capsular polysaccharides were identified by the use of monospecific anti-equine heavy chain reagents. Various oligosaccharides, including di-, tri-, tetra-, and pentasaccharides of β-(1 → 4)-linked glucose (G) as well as Gβ(1 → 3) Gβ(1 →4)G and Gβ(1 → 3) Gβ(1 → 4) Gβ(1 → 4)G, were assayed for their ability to inhibit anti-Pn VIII precipitation by xanthomonal antigen. Combining sites of antibody cross-precipitated by xanthomonal antigen optimally accommodate a cellodextrin structure consisting of a terminal or internal sequence of only 2 β-(1 → 4)-linked glucose units. Inhibition data showing an ordering (cellopentaose = cellotetraose > cellotriose > cellobiose) in the relative ability of cellodextrins to inhibit oat glucan precipitation establish that a sequence for 4 consecutive glucose units in β-(1 → 4) linkage provides the optimal cellodextrin ligand structure accommodated by combining sites of the anti-Pn VIII fraction interacting with oat glucan.
AN 1978:440695 HCAPLUS <<LOGINID::20081124>>
DN 89:40695
OREF 89:6299a,6302a
TI Immunochemical studies on equine immunoglobulins. Part VI. Combining site specificity of antipneumococcal type VIII horse immunoglobulins cross-reactive with mild acid-treated Xanthomonas campestris

polysaccharide
AU Allen, Peter Z.
CS Dep. Microbiol., Univ. Rochester Sch. Med. Dent., Rochester, NY, USA
SO Archives of Biochemistry and Biophysics (1978), 188(2), 376-84
CODEN: ABBIA4; ISSN: 0003-9861
DT Journal
LA English

L9 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Inducible polysaccharide depolymerases of Bacillus palustris
AB The preparation, properties, and method of assay are described of depolymerases of capsular polysaccharides of type III and type VIII pneumococci (S3 and S8). Conditions were studied for the induced formation of the depolymerases, D3 and D8, resp., by B. palustris N3574. S8 depolymerase (D8) is formed only when its specific substrates (polysaccharide of type VIII pneumococcus, oxidized cellulose, or their partial degradation products) are present as the sole C source. S3 depolymerase (D3) is produced even in the presence of other energy sources, provided small amts. of type III pneumococcal polysaccharide or its partial hydrolysis products are added to the medium. Despite these striking differences in substrate specificity, in the conditions necessary for their formation, and differences in their immunochem. behavior and stability as proteins, the depolymerases have similar modes of action. Both are endoenzymes, since they rapidly decrease the viscosity of solns. of their homologous substrates with a slow appearance of reducing groups. Studies on a series of oligosaccharides and polysaccharides showed that the 1,4-β-linkage, as in cellobiuronic acid, is a necessary although not sufficient condition for optimum induction of S3 and S8 depolymerases. Likewise, only those saccharides containing the 1,4-β-glucuronido linkage are attacked by either depolymerase. The 2 enzymes represent distinct proteins with different heat and pH stabilities and antigenic specificities. Both enzymes cleave linkages at random along the corresponding polysaccharide chain rather than from the ends of the chain. In the case of S8 hydrolysis, the final product is a tetrasaccharide tentatively identified as glucose-1,4-β-giucose-1,4-α-galactose-1,4-α-glucuronic acid. The hydrolysis products of S3 contain as yet unidentified oligosaccharides with average chain length of 4 hexose units. The isolated products of both enzymes were examined for their inducing activity. Even the final products of D3 hydrolysis of S3, with reducing activity equivalent to an average chain length of only 4 hexose units are as effective as fully polymerized S3 as an inducer although cellobiuronic acid does not induce at all. Moreover, the kinetics of enzyme induction by dialyzed, fully polymerized S3 are unaffected by the addition of a potent neutralizing anti-D3 rabbit serum to cultures of B. palustris. Probably the smallest unit capable of inducing maximum D3 or D8 formation is larger than a tetrasaccharide. In the case of D8, cellobiuronic acid has some activity as an inducer but is inferior to partial hydrolysis products of S8 containing several hexose units.
AN 1962:47833 HCAPLUS <<LOGINID::20081124>>
DN 56:47833
OREF 56:9107h-i,9108a-e
TI Inducible polysaccharide depolymerases of Bacillus palustris
AU Torriani, Annamaria; Pappenheimer, A. M., Jr.
CS Harvard Univ.
SO Journal of Biological Chemistry (1962), 237, 3-13
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable

L9 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Biosynthesis of pneumococcal capsular polysaccharides. I. Properties of the system synthesizing type III capsular polysaccharide
AB cf. CA 54, 25041c. The enzyme system from type III capsulated pneumococci which catalyzes the formation of the specific polysaccharide from uridine diphosphoglucose and uridine diphosphoglucuronic acid has a pH optimum at 8.35 and a temperature optimum at 32°. Maximum synthesis of S III was obtained in 60 min. and the rate of synthesis was proportional to enzyme concentration The reaction depends on Mg, and shows optimum activity when one substrate is present at a concentration of 0.33 millimolar and the other at 0.5 millimolar. The activity of the enzyme depends on the presence of preformed type III capsular polysaccharide. Ultracentrifugation showed that the S III-synthesizing system is present in the particulate fraction sedimented between 30,000 g and 140,000 g. Less than 10% of the total enzyme activity is found in the supernatant solution and the synthesis of S III polysaccharide is proportional to the amount of particulate material used. At the highest level of particulate material used, the amount of S III synthesized represents complete utilization of the substrates available. Exts. from a noncapsulated type III pneumococcus also synthesize type III capsular polysaccharide from uridine diphosphoglucose and uridine diphosphoglucuronic acid. The synthetic activity of such exts. is less than that of exts. from capsulated cells.
AN 1961:138148 HCAPLUS <<LOGINID::20081124>>
DN 55:138148
OREF 55:26128g-i,26129a
TI Biosynthesis of pneumococcal capsular polysaccharides. I. Properties of the system synthesizing type III capsular polysaccharide
AU Smith, Evelyn E. B.; Mills, Geo. T.; Bernheimer, Harriet P.
CS State Univ. of New York Coll. of Med., Brooklyn
SO Journal of Biological Chemistry (1961), 236, 2179-82
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable

L9 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Synthesis of type III pneumococcal polysaccharide by suspensions of resting cells
AB The capsular polysaccharide (SIII) of type III pneumococci was removed by the SIII enzyme prepared by a method similar to that of Dubos (C.A. 29, 6919.4) and the cells thus deprived of preformed SIII were washed and examined for capacity to synthesize SIII anew. The washed, decapsulated cocci lost their capacity to be agglutinated in type-specific antiserum but again became agglutinable and formed readily measurable amts. of SIII after suspension in a solution containing only glucose and salts. Maximum SIII synthesis required glucose, Mg, K, P, and O. Other fermentable sugars could be substituted for glucose but the yield of SIII was reduced. Synthesis of SIII occurred anaerobically but was increased four- to five-fold by oxygenation of the suspension. The effects of pH and of enzyme poisons, HgCl2, iodoacetate, dinitrophenol, HCN, F, azide, arsenite, and malonate on the capacity to form SIII are described.
AN 1953:62402 HCAPLUS <<LOGINID::20081124>>
DN 47:62402
OREF 47:10616a-d
TI Synthesis of type III pneumococcal polysaccharide by suspensions of resting cells
AU Bernheimer, Alan W.
CS New York Univ., New York, NY

SO Journal of Experimental Medicine (1953), 97, 591-600
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA Unavailable

L9 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A new method for production of nonspecific capsular swelling of the pneumococcus
AB Pneumococcal polysaccharides appear to combine with various proteins at pH 4 to form insol. aggregates. The reaction is reversed by readjusting the pH to 7. Nonspecific capsular swelling of pneumococci can be produced by many different proteins under such conditions, provided the mixture at pH 4 is relatively salt-free. It appears that an altered state of the capsular gel is produced by interaction of protein and carbohydrate, and in the absence of ionized salts the polysaccharide-protein complex becomes more hydrophilic and therefore swells.
AN 1948:15902 HCAPLUS <<LOGINID::20081124>>
DN 42:15902
OREF 42:3455d-e
TI A new method for production of nonspecific capsular swelling of the pneumococcus
AU Jacox, Ralph F.
CS Univ. of Rochester, NY
SO Proceedings of the Society for Experimental Biology and Medicine (1947), 66, 635-8
CODEN: PSEBAA; ISSN: 0037-9727
DT Journal
LA Unavailable

L9 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The detectability of pneumococcal capsular polysaccharide in urine: influence of variation in pH
AB In an extension of previous studies (C. A. 34, 792.9) the influence of pH (6-8) on the detectability, by use of appropriate antiserums, of pneumococcal capsular polysaccharide (I) in normal urine was determined for types 1 to 5 and 7, 8 and 14. In all expts. lower concns. of I were detected at pH 7-8 than at 6; adjustment of urines to be tested to the higher pH was recommended.
AN 1941:9313 HCAPLUS <<LOGINID::20081124>>
DN 35:9313
OREF 35:1507h-i
TI The detectability of pneumococcal capsular polysaccharide in urine: influence of variation in pH
AU De Gara, Paul F.; Bukantz, Samuel C.
SO Journal of Immunology (1940), 39, 297-305
CODEN: JOIMA3; ISSN: 0022-1767
DT Journal
LA Unavailable

L9 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Behavior of acid-treated antipneumococcal rabbit antibodies
AB Solns. of pneumococcal rabbit antibody of various types (types 1, 2, 3, 5, 7, 8, and 14) were acidified to various pH (4.4 to 2.7) with lactic, hydrochloric or sulfuric acids. The nature of the acid was found to be of no importance. The ppts. obtained were removed and were always found to contain no antibody. The acidified antibody solns. were neutralized, and dialyzed against 0.85% NaCl for 48 hrs. Antibody solns. treated as described showed an increase in the N precipitable by specific polysaccharide (up to 50%), and a shift in the antigen-antibody combining ratio occurred at the same time; the ratio of mouse-protective

value/N specifically precipitated was lowered. The complement-fixing quality was
impaired or lost when this last ratio was lowered. Loss of complement-fixing quality was also observed with antibody refined by partial peptic digestion; these serums also had low mouse-protective values. The properties of causing capsular swelling and of eliciting passive anaphylactic shock were unimpaired in acid-treated serums. The implications of the observations are discussed. The use of substituted naphthalenesulfonic acids for purification of pneumococcal antibodies is described. Such purified antibody solns. responded similarly to acid treatment.

AN 1940:3252 HCAPLUS <<LOGINID::20081124>>
DN 34:3252
OREF 34:513e-h
TI Behavior of acid-treated antipneumococcal rabbit antibodies
AU Weil, A. J.; Moos, A. M.; Clapp, Frances L.
SO Journal of Immunology (1939), 37, 413-24
CODEN: JOIMA3; ISSN: 0022-1767
DT Journal
LA Unavailable

L9 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Capsular polysaccharide of the type XIV pneumococcus and its relation to the specific substances in the blood
AB Type XIV pneumococci from a human strain were grown on meat infusion broth and collected in a centrifuge. The organisms from 50 l. were resuspended in saline and allowed to autolyze at 37.5° for 72 hrs. The Gram-neg. bacterial detritus was removed by centrifugation and the clear supernatant liquid concentrated in vacuo to 500 cc. Protein was removed by adjusting the pH to 3.78 and centrifuging. The sp. polysaccharide (I) was precipitated by the addition of 1.5 vols. EtOH and purified by repeated solution and repptn. I is soluble in water to approx. 1%. Tests for uronic acids and protein were neg. I is not precipitated or only partially precipitated by heavy metals but is precipitated by tannic acid. Biuret, ninhydrin, sulfosalicylic acid, Hopkins-Cole, Millon and xanthoproteic tests were neg. Molisch and amino sugar tests were strong. Analysis of I shows C 44.4, H 6.8, N 5, Ac 9.0, reducing sugar (calculated as glucose) 74, amino sugar 62% and [α]D 12.5°. Serologically, I reacts with type XIV antipneumococcal horse and rabbit serums in dilns. as high as 1:4,000,000. It is neither identical nor contaminated with the blood group A substance. I in its natural state, as a part of the intact cell, may well possess sufficient chemical and immunological relationship to the blood group specific substances to incite in the horse the formation of agglutinins for human erythrocytes, simultaneously with the production of other type-specific antibodies. The relationship of I to the blood group specific substances is further substantiated by the fact that absorption of type XIV antipneumococcal horse serum with homologous polysaccharide removes the hemagglutinins for all blood groups. The blood group A specific substance gives a vigorous precipitin reaction in the cold with type XIV antipneumococcus horse (but not with rabbit) serum.

AN 1938:60239 HCAPLUS <<LOGINID::20081124>>
DN 32:60239
OREF 32:8469i,8470a-e
TI Capsular polysaccharide of the type XIV pneumococcus and its relation to the specific substances in the blood
AU Hoagland, Charles L.; Beeson, Paul B.; Goebel, Walther F.
SO Science (Washington, DC, United States) (1938), 88, 261-3

CODEN: SCIEAS; ISSN: 0036-8075
DT Journal
LA Unavailable

L9 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Decomposition of the capsular polysaccharide of pneumococcus type III by a bacterial enzyme
AB An organism (I) has been isolated from peat soil which decomps. the sp. capsular polysaccharide (II) of type III pneumococcus. The isolation has been made possible by the use of a synthetic mineral medium containing the II as sole source of C; by repeated transfers in this medium the potential capacity of the I to decompose the sp. substance has been progressively increased. I is a pleomorphic bacillus, motile and spore forming, exhibiting metachromatic granules; its reaction to the Gram stain varies according to the medium on which it is grown. It is strictly aerobic and grows well in plain broth and peptone solns.; it does not produce gas in any media and forms small amts. of acids only on dextrin, galactose, lactose, salicin and trehalose; its growth is inhibited by glucose. I decomps. II aerobically, between pH 6.2 and 7.8 at room temperature and at 37.5° but not at 54°. The decomposition of II is inhibited by the presence in the medium of other nutrients such as peptones, which act as more readily available sources of energy. The action of I is sp.; it does not attack the soluble sp. substance of Type I or II pneumococcus nor any of the other bacterial polysaccharides thus far tested. I possesses an endocellular enzyme; this enzyme has been extracted by autolysis of the bacterial cells; in sterile solution it exhibits the same sp. action as do the organisms from which it is derived, decomposing only the II. I decomps. II under anaerobic as well as aerobic conditions; it is inactivated at 60-65°; the rate of decomposition of II is not affected by the presence of normal serum. There exists a quant. relationship between the total amount of sp. substance decomposed and the amount of enzyme preparation used; the existence of this relation makes it possible to express the activity of a given enzyme preparation in terms of the minimal amount required for the complete decomposition of a given amount of sp. substance. The sp. decomposition of II, by the organsim as well as by the I it produces, illustrates once more the specificity of the types of pneumococcus and confirms the fact that the capsular polysaccharides and not some impurities carried along with them are responsible for type specificity.
AN 1931:40437 HCAPLUS <<LOGINID::20081124>>
DN 25:40437
OREF 25:4575b-f
TI Decomposition of the capsular polysaccharide of pneumococcus type III by a bacterial enzyme
AU Dubos, Rene; Avery, Oswald T.
SO Journal of Experimental Medicine (1931), 54, 51-71
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA Unavailable

=> d his

(FILE 'HOME' ENTERED AT 16:41:18 ON 24 NOV 2008)

FILE 'HCAPLUS' ENTERED AT 16:41:30 ON 24 NOV 2008
L1 68019 S POLYSACCHARIDE
L2 11051 S (TYPE 5) OR CAPSULAT
L3 18409 S (TYPE 5) OR CAPSULAR

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L4          3525 S PNEUMOCOCCUS
L5          4703 S L1 AND (L4 OR L3)
L6           297 S L1 AND (L4 AND L3)
L7           250 S L6 AND (PY<2003 OR AY<2003 OR PRY<2003)
L8       1540559 S MICROWAVE OR PH
L9            14 S L7 AND L8

=> log hold

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    48.81      49.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                   -11.20     -11.20

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STN INTERNATIONAL SESSION SUSPENDED AT 16:43:25 ON 24 NOV 2008

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PASSWORD:
  * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:51:45 ON 24 NOV 2008
FILE 'HCAPLUS' ENTERED AT 16:51:45 ON 24 NOV 2008
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    48.81      49.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                   -11.20     -11.20

=> s reductinve amination
            0 REDUCTINVE
        33490 AMINATION
L10         0 REDUCTINVE AMINATION
                (REDUCTINVE(W)AMINATION)

=> s (reductive amination) or cyanoborohydride
        67405 REDUCTIVE
        33490 AMINATION
         6230 REDUCTIVE AMINATION
                (REDUCTIVE(W)AMINATION)
         1870 CYANOBOROHYDRIDE
L11      7825 (REDUCTIVE AMINATION) OR CYANOBOROHYDRIDE

=> s l7 and l11
L12         0 L7 AND L11

=> s l1 and (L3 or L4) and L11
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L13          37 L1 AND (L3 OR L4) AND L11

=> s l13 and (PY<2003 or AY<2003 or PRY<2003)
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       4500211 AY<2003
       3968587 PRY<2003
L14          28 L13 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l14 1-28 ti abs bib

L14  ANSWER 1 OF 28  HCAPLUS  COPYRIGHT 2008 ACS on STN
TI   Modified saccharides and their protein conjugates
AB   Saccharide-protein conjugates having a new type of linker are described.
     The conjugates comprising the new linker are prepared from modified
     capsular saccharides.  The linker is especially useful for preparing
     conjugates of Neisseria meningitidis serogroup A saccharide.  Conjugates
     having this new linker have improved immunogenicity compared to other
     types of conjugates.  A process for modifying a capsular
     saccharide comprises the steps of: (a) providing a capsular
     saccharide having a hydroxy group; (b) reacting the hydroxy group with a
     bifunctional reagent, e.g., 1,1'-carbonyldiimidazole or
     carbonyldi-1,2,4-triazole in an organic solvent; and (c) reacting the product
     of step (b) with an amino compound, such as 1-amino-4,5-pentanediol.  The
     product of step (c) is cleaved with periodate, thereby providing an
     aldehyde compound suitable for linking to a protein by a reductive
     amination reaction using NaBH3CN.  A pharmaceutical composition
     comprising a saccharide-protein conjugate, an adjuvant, and a carrier for
     preventing or treating diseases, such as bacterial meningitis, is also
     described.
AN   2004:203711  HCAPLUS <<LOGINID::20081124>>
DN   140:240996
TI   Modified saccharides and their protein conjugates
IN   Giannozzi, Aldo; Averani, Giovanni; Norelli, Francesco; Costantino, Paolo
PA   Chiron S.r.l., Italy
SO   PCT Int. Appl., 30 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    -------------------    --------
PI   WO 2004019992       A1     20040311    WO 2003-IB4194         20030901 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
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             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     CA 2497167           A1     20040311    CA 2003-2497167        20030901 <--
     AU 2003260921        A1     20040319    AU 2003-260921         20030901 <--
     AU 2003260921        B2     20080306
     EP 1534342           A1     20050601    EP 2003-791149         20030901 <--
     EP 1534342           B1     20060308
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     CN 1688343           A      20051026    CN 2003-823724         20030901 <--
     BR 2003014089        A      20051116    BR 2003-14089          20030901 <--
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	AT 319481	T	20060315	AT 2003-791149	20030901	<--
	JP 2006511465	T	20060406	JP 2004-532625	20030901	<--
	NZ 538703	A	20060929	NZ 2003-538703	20030901	<--
	ES 2260682	T3	20061101	ES 2003-791149	20030901	<--
	MX 2005PA02315	A	20050608	MX 2005-PA2315	20050228	<--
	US 20060263390	A1	20061123	US 2005-526124	20050228	<--
PRAI	GB 2002-20198	A	20020830	<--		
	WO 2003-IB4194	W	20030901			

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Preclinical evaluation of group B streptococcal polysaccharide conjugate vaccines prepared with a modified diphtheria toxin and a recombinant duck hepatitis B core antigen
AB An effective vaccine against group B streptococcal (GBS) disease will undoubtedly include capsular polysaccharides (CPSs) from each of the five serotypes prevalent in the United States individually coupled to immunogenic proteins. This formulation may require the use of two or more different protein carriers. We preclinically examined the potential of two proteins to serve as effective carriers for GBS type III CPS. Recombinant duck hepatitis B core antigen (rdHBcAg), a particulate protein of viral origin, and a newly mutated form of diphtheria toxin (DTm) were covalently and directly coupled to purified type III CPS by reductive amination. Seventy-seven of 79 (97%) newborn pups born to mouse dams actively vaccinated with type III CPS-rdHBcAg conjugate survived GBS type III challenge, whereas none of the pups born to dams that received an uncoupled mixture of type III CPS and rdHBcAg or saline survived. Likewise, 64 (98%) of 65 pups born to dams vaccinated with type III CPS-DTm conjugate survived challenge, in sharp contrast to no survivors among the pups born to dams vaccinated with an uncoupled mixture of type III CPS and DTm. The presence of type III CPS-specific IgG in serum from dams correlated with pup survival in groups that received a conjugate vaccine, and this serum was opsonically active in vitro against GBS type III. In addition, carrier-specific IgG was also measured in serum from vaccinated mice. These data suggest that the rdHBcAg and DTm may be effective carriers for GBS CPSs.
AN 2001:771468 HCAPLUS <<LOGINID::20081124>>
DN 136:384559
TI Preclinical evaluation of group B streptococcal polysaccharide conjugate vaccines prepared with a modified diphtheria toxin and a recombinant duck hepatitis B core antigen
AU Paoletti, Lawrence C.; Peterson, Darrell L.; Legmann, Rachel; Collier, R. John
CS Channing Laboratory, Department of Medicine, Brigham and Women's Hospital, Boston, MA, 02115, USA
SO Vaccine (2001), 20(3-4), 370-376
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Formulation and characterization of Bordetella pertussis fimbriae as novel carrier proteins for Hib conjugate vaccines
AB Haemophilus influenzae type b (Hib) capsular polysaccharide (polyribosylribitol phosphate, PRP) is the active component of conjugate vaccines that have proven successful in preventing invasive Hib disease. Conjugation of PRP to a protein carrier greatly

improves its immunogenicity providing protection in infants and subsequent antibody maturation upon boosting. In this study, fimbriae isolated from Bordetella pertussis have been assessed as novel carrier proteins. These proteins are components of some acellular pertussis vaccines and clin. trials have indicated that fimbriae could be important protective antigens against whooping cough. Fimbriae (Fim2 and Fim3) purified from B. pertussis were dissociated in 6 M guanidine hydrochloride, pH 10.5, to produce proteins of defined size and to facilitate the production and characterization of the conjugates. Both carbodiimide-mediated coupling and reductive amination were used to conjugate PRP to dissociated fimbriae. Efficiency of conjugation was determined by size exclusion chromatog. followed by protein and polysaccharide anal. of fractionated components. Immunization of rabbits with dissociated fimbriae-PRP conjugates (D.fim-PRP) produced high anti-fimbrial and anti-PRP IgG titers. Use of a D.fim-PRP conjugate could protect against Hib disease and may also augment protection against B. pertussis.

AN 2001:334007 HCAPLUS <<LOGINID::20081124>>
DN 136:221575
TI Formulation and characterization of Bordetella pertussis fimbriae as novel carrier proteins for Hib conjugate vaccines
AU Crowley-Luke, A.; Reddin, K.; Gorringe, A.; Hudson, M. J.; Robinson, A.
CS Centre for Applied Microbiology and Research, Salisbury, SP4 0JG, UK
SO Vaccine (2001), 19(25-26), 3399-3407
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Novel meningococcal semi-synthetic polysaccharide-protein conjugate vaccines
AB The success of capsular polysaccharide vaccines in adults and particularly in children remains very limited. These thymus independent (TI) antigens are generally not effective in infants. Covalent bonding of these carbohydrate antigens to thymus dependent (TD) proteins can transform them into TD antigens. Haemophilus influenzae type b (Hib) conjugate vaccines to prevent meningitis have been the first of these semi-synthetic vaccines to be licensed. Three meningococcal C conjugates to prevent meningitis have been licensed in the U.K., and a pneumococcal conjugate to prevent invasive pneumonia in infants is now licensed in the U.S. Novel procedures have been developed for the preparation of the carbohydrate antigens to be conjugated, as well as selective chemical manipulations of the polysaccharides and efficient coupling chemistries like reductive amination. In addition, alternative carrier proteins, using recombinant technologies, have been utilized to overcome potential overloading of the immune system with conventional carriers, thereby providing better and safer immunogens. Using state of the art modern technologies, a better understanding of the chemical nature of the protective epitopes on the polysaccharide has provided elements for a rational design of these conjugate mols. As a result, following chemical manipulation of the meningococcal C polysaccharide through its de-O-acetylation, new protective epitopes were created that contributed to the superior immunogenicity of NeisVac-C- in clin. trials. For group B meningococci, newly defined conformational protective epitopes, with the N-propionylation of the polysaccharide and the introduction of a new carrier protein (rPorB) as an immunomodulator, resulted in a novel vaccine candidate to prevent meningococcal B disease. The success of these conjugate vaccines will certainly continue to rise

with a better understanding of this new field, which has now become a real technol. platform.

AN 2001:197351 HCAPLUS <<LOGINID::20081124>>

TI Novel meningococcal semi-synthetic polysaccharide-protein conjugate vaccines

AU Michon, Francis; Blake, Milan S.; Fusco, Peter C.

CS Baxter Healthcare Corporation, Columbia, MD, 21046, USA

SO Abstracts of Papers, 221st ACS National Meeting, San Diego, CA, United States, April 1-5, 2001 (2001) BIOT-044
CODEN: 69FZD4

PB American Chemical Society

DT Journal; Meeting Abstract

LA English

L14 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Group B Streptococcus capsular polysaccharide-cholera toxin B subunit conjugate vaccines prepared by different methods for intranasal immunization

AB Group B Streptococcus (GBS) type III capsular polysaccharide (CPS III) was conjugated to recombinant cholera toxin B subunit (rCTB) using 3 different methods which employed (1) cystamine and N-succinimidyl-3-(2-pyridyldithio)propionate (SPDP), (2) carbodiimide with adipic acid dihydrazide (ADH) as a spacer, or (3) reductive amination (RA). The CPS III-rCTB conjugates were divided into large- and small-mol.-weight (Mr) fractions, and the immunogenicities of the different prepns. after intranasal (i.n.) immunization were studied in mice. Both large- and small-Mr conjugates of CPS III-rCTBRA or CPS III-rCTBADH induced high, almost comparable levels of CPS-specific IgG in serum, lungs, and vagina that were generally superior to those obtained with CPS III-rCTBSPDP conjugates or a CPS III and rCTB mixture However, the smaller-Mr conjugates of CPS III-rCTBRA or CPS III-rCTBADH in most cases elicited a lower anti-CPS IgA immune response than the large-Mr conjugates, and the highest anti-CPS IgA titers in both tissues and serum were obtained with the large-Mr CPS III-rCTBRA conjugate. Serum IgG anti-CPS titers induced by the CPS III-rCTBRA conjugate had high levels of specific IgG1, IgG2a, IgG2b, and IgG3 antibodies. Based on the effectiveness of RA for coupling CPS III to rCTB, RA was also tested for conjugating GBS CPS Ia with rCTB. As for the CPS III-rCTB conjugates, the immunogenicity of CPS Ia was greatly increased by conjugation to rCTB. Intranasal immunization with a combination of CPS Ia-rCTB and CPS III-rCTB conjugates was shown to induce anti-CPS Ia and III immune responses in serum and lungs that were fully comparable with the responses to immunization with the monovalent CPS Ia-rCTB or CPS III-rCTB conjugates. Thus, the GBS CPS III-rCTB and CPS Ia-rCTB conjugates prepared by the RA method may be used in bivalent and possibly also in multivalent mucosal GBS conjugate vaccines.

AN 2001:20258 HCAPLUS <<LOGINID::20081124>>

DN 134:177010

TI Group B Streptococcus capsular polysaccharide-cholera toxin B subunit conjugate vaccines prepared by different methods for intranasal immunization

AU Shen, Xuzhuang; Lagergard, Teresa; Yang, Yonghong; Lindblad, Marianne; Fredriksson, Margareta; Holmgren, Jan

CS Department of Medical Microbiology and Immunology, Goteborg University, Goteborg, S-413 46, Swed.

SO Infection and Immunity (2001), 69(1), 297-306
CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology

DT Journal

LA English

RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation and preclinical evaluation of experimental group B streptococcus type III polysaccharide-cholera toxin B subunit conjugate vaccine for intranasal immunization
AB Streptococcus group B (GBS) is usually carried asymptomatically in the vaginal tract of women and can be transferred to the newborn during parturition. Serum antibodies to the capsular polysaccharide (CPS) can prevent invasive diseases, whereas immunity acting at the mucosal surface may be more important to inhibit the mucosal colonization of GBS and thus the risk of infection for the newborn. We prepared different GBS type III CPS-protein conjugate vaccines and evaluated their systemic and mucosal immunogenicity in mice. GBS type III CPS was conjugated to tetanus toxoid (TT) or recombinant cholera toxin B subunit (rCTB) either directly or to rCTB indirectly via TT. The conjugation was performed by different methods: (1) CPS was coupled to TT with 1-ethyl-3 (3-dimethylaminopropyl)-carbodiimide (EDAC), using adipic acid dihydrazide (ADH) as a spacer; (2) CPS was conjugated with rCTB using reductive amination; or, (3) N-succinimidyl 3-(2-pyridyldithio) propionate (SPDP) was used to bind rCTB to the TT of the CPS-TT conjugate. Mice were immunized with these conjugates or purified CPS by s.c. and intranasal (i.n.) routes. Antibodies to GBS III in serum, lungs and vagina were measured with ELISA. All of the CPS-protein conjugates were superior to unconjugated CPS in eliciting CPS-specific immune responses in serum and mucosal tissue exts. The conjugates, when administered s.c., induced only IgG responses in serum, lung and vagina, while i.n. vaccination also elicited IgA responses in the lungs and vagina. The CPS-TT conjugate administered i.n. induced a strong serum IgG, but only a weak mucosal IgA response, while the CPS-rCTB conjugate elicited high IgG as well as IgA antibodies in the lungs after i.n. immunization. GBS III CPS-TT conjugated with rCTB produced a strong systemic and local anti-CPSIII response after i.n. administration. Co-administration of CT as adjuvant enhanced the anti-CPS systemic and mucosal immune responses further after i.n. administration with the CPS conjugates. These findings indicate that: (i) i.n. immunization with GBS CPS-protein conjugates was more effective than s.c. immunization for stimulating serum as well as mucosal immune responses; (ii) rCTB as a carrier protein for GBS III CPS could markedly improve the mucosal immune response; and (iii) the exptl. GBS type III CPS conjugates containing rCTB should be investigated as mucosal vaccine to prevent GBS infection in humans.
AN 2000:874738 HCAPLUS <<LOGINID::20081124>>
DN 135:136084
TI Preparation and preclinical evaluation of experimental group B streptococcus type III polysaccharide-cholera toxin B subunit conjugate vaccine for intranasal immunization
AU Shen, X.; Lagergard, T.; Yang, Y.; Lindblad, M.; Fredriksson, M.; Holmgren, J.
CS Department of Medical Microbiology and Immunology, Goteborg University, Goteborg, S-413 46, Swed.
SO Vaccine (2000), 19(7-8), 850-861
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Use of capsular polysaccharide-tetanus toxoid

conjugate vaccine for type II group B Streptococcus in healthy women
AB An estimated 15% of invasive group B streptococcal (GBS) disease is caused by type II capsular polysaccharide (II CPS). In developing a pentavalent vaccine for the prevention of GBS infections, individual GBS CPSs have been coupled to tetanus toxoid (TT) to prepare vaccines with enhanced immunogenicity. Type II GBS (GBS II) vaccine was created by direct, covalent coupling of II CPS to TT by reductive amination. In 2 clin. trials, 75 healthy nonpregnant women 18-45 yr old were randomized to receive II CPS-TT (II-TT) conjugate (dose range, 3.6-57 μg of CPS component) or uncoupled II CPS vaccine. Both vaccines were well tolerated. II CPS-specific IgG serum concns. (as well as IgM and IgA) peaked 2 wk after immunization, being higher in recipients of conjugated vaccine than in recipients of uncoupled CPS. Immunol. responses to conjugate were dose dependent and correlated with opsonophagocytosis in vitro. These results support inclusion of II-TT conjugate when preparing a multivalent GBS vaccine.
AN 2000:738304 HCAPLUS <<LOGINID::20081124>>
DN 134:279231
TI Use of capsular polysaccharide-tetanus toxoid conjugate vaccine for type II group B Streptococcus in healthy women
AU Baker, Carol J.; Paoletti, Lawrence C.; Rench, Marcia A.; Guttormsen, Hilde-Kari; Carey, Vincent J.; Hickman, Melissa E.; Kasper, Dennis L.
CS Section of Infectious Diseases, Departments of Pediatrics and Molecular Virology and Microbiology, Baylor College of Medicine, Houston, TX, 77030, USA
SO Journal of Infectious Diseases (2000), 182(4), 1129-1138
CODEN: JIDIAQ; ISSN: 0022-1899
PB University of Chicago Press
DT Journal
LA English
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Group B streptococcal carbohydrates: Their role in virulence and as vaccines.
AB Group B Streptococus (GBS) is a major cause of neonatal disease in the United States. GBS express two distinct surface sugars: the group B carbohydrate and the type -specific capsular polysaccharide (CPS). Although the former is common to all GBS, protective antibody targets predominately the CPS antigen. Of the nine structurally and antigenically unique GBS serotypes, five (Ia, Ib, II, and V) are prevalent in the U.S. Population. The CPSs of these serotypes are comprised of oligosaccharide repeating units containing glucose, galactose, N-acetylglucosamine, and N-acetylneuraminic acid. The immunogenicity of these otherwise weak antigens has been improved by coupling them directly to carrier proteins by reductive amination. GBS CPS-protein conjugate vaccines elicit in humans high levels of functionally active and protective antibody. An understanding of the chemical, biol. and immunol. of GBS CPS antigens has yielded a new generation of vaccines against GBS disease.
AN 1999:539754 HCAPLUS <<LOGINID::20081124>>
TI Group B streptococcal carbohydrates: Their role in virulence and as vaccines.
AU Paoletti, Lawrence, C.
CS Department of Medicine, Channing Laboratory, Harvard Medical School, Boston, MA, 02115, USA
SO Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22-26 (1999), CARB-021 Publisher: American Chemical Society, Washington, D. C.
CODEN: 67ZJA5

DT Conference; Meeting Abstract
LA English

L14 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Alpha C protein as a carrier for type III capsular polysaccharide and as a protective protein in group B streptococcal vaccines
AB The alpha C protein, a protective surface protein of group B streptococci (GBS), is present in most non-type III GBS strains. Conjugate vaccines composed of the alpha C protein and type III capsular polysaccharide (CPS) might be protective against most GBS infections. In this study, the type III CPS was covalently coupled to full-length, nine-repeat alpha C protein (resulting in III-α9r conjugate vaccine) or to two-repeat alpha C protein (resulting in III-α2r conjugate vaccine) by reductive amination . Initial expts. with the III-α9r vaccine showed that it was poorly immunogenic in mice with respect to both vaccine antigens and was suboptimally efficacious in providing protection in mice against challenge with GBS. Therefore, modified vaccination protocols were used with the III-α2r vaccine. Female mice were immunized three times with 0.5, 5, or 20 μg of the III-α2r vaccine with an aluminum hydroxide adjuvant and bred. Ninety-five percent of neonatal mice born to dams immunized with the III-α2r vaccine survived challenge with GBS expressing type III CPS, and 60% survived challenge with GBS expressing wild-type (nine-repeat) alpha C protein; 18 and 17%, resp., of mice in the neg. control groups survived (P, <0.0001). These protection levels did not differ significantly from those obtained with the type III CPS-tetanus toxoid conjugate vaccine and the unconjugated two-repeat alpha C protein, which protected 98 and 58% of neonates from infection with GBS expressing type III CPS or the alpha C protein, resp. Thus, the two-repeat alpha C protein in the vaccine was immunogenic and simultaneously enhanced the immunogenicity of type III CPS. III-α vaccines may be alternatives to GBS polysaccharide-tetanus toxoid vaccines, eliciting addnl. antibodies protective against GBS infection.
AN 1999:291215 HCAPLUS <<LOGINID::20081124>>
DN 131:72432
TI Alpha C protein as a carrier for type III capsular polysaccharide and as a protective protein in group B streptococcal vaccines
AU Gravekamp, Claudia; Kasper, Dennis L.; Paoletti, Lawrence C.; Madoff, Lawrence C.
CS Channing Laboratory, Boston, MA, 02115, USA
SO Infection and Immunity (1999), 67(5), 2491-2496
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI A new method of non-crosslinking conjugation of polysaccharides to proteins via thioether bonds for the preparation of saccharide-protein conjugate vaccines
AB Bacterial polysaccharides, including capsular polysaccharides, are poor immunogens particularly in young infants. However, conjugation of bacterial polysaccharides to immunogenic carrier proteins generally results in conjugates that induce strong antipolysaccharide T-helper-cell dependent immune responses, also in young infants. The magnitude of the response and the extent of the T-helper-cell dependency is related to the chemical characteristics of the particular conjugate such as presence or

absence of polysaccharide-protein crosslinking, presence or absence of spacer arms, character of spacer arms, type of carrier protein, size of conjugated polysaccharide hapten and molar degree of substitution. In the present study a new, general and simple method for the preparation of poly- and oligosaccharide-protein conjugates is presented. This new method is based on spacer-introducing chemical that allows for conjugation of a model polysaccharide, dextran, ranging in size from 0.5 to 150 kDa, to tetanus toxoid (TTd). The developed conjugation method involves derivatization of polysaccharide with 2-iminothiolane (2-IT) and activation of carrier protein, such as TTd, with N-hydroxysuccinimide ester of bromoacetic acid. Reaction rates and accordingly the substitution of the conjugates, could be controlled by varying time, pH and concentration of the reactants. Unlike direct reductive amination, the 2-IT based conjugation technol. is fast and made it possible to couple fairly large polysaccharides to TTd.

AN 1999:234182 HCAPLUS <<LOGINID::20081124>>
DN 131:78311
TI A new method of non-crosslinking conjugation of polysaccharides to proteins via thioether bonds for the preparation of saccharide-protein conjugate vaccines
AU Pawlowski, Andrzej; Kallenius, Gunilla; Svenson, Stefan B.
CS Department of Bacteriology, Swedish Institute for Infectious Disease Control, Stockholm, S-105 21, Swed.
SO Vaccine (1999), 17(11-12), 1474-1483
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Multivalent pneumococcal capsular polysaccharide conjugate vaccines employing genetically detoxified pneumolysin as a carrier protein
AB A genetically detoxified pneumolysin, pneumolysoid (PLD), was investigated as a carrier protein for pneumococcal capsular polysaccharide (CPS). Such a CPS-PLD conjugate might provide addnl. protection against pneumococcal infections and resultant tissue damage. A single point mutant of pneumolysin was selected, which lacked measurable hemolytic activity, but exhibited the overall structural and immunol. properties of the wild type. PLD conjugates were prepared from CPS serotypes 6B, 14, 19F, and 23F by reductive amination. The structural features of free PLD, as well as the corresponding CPS-PLD, as assessed by CD spectroscopy, were virtually indistinguishable from the wild type counterpart. Each of the CPS monovalent and tetravalent conjugate formulations were examined for immunogenicity in mice at both 0.5 and 2.0 μg CPS per dose. Tetanus toxoid (TT) conjugates were similarly created and used for comparison. The resultant conjugate vaccines elicited high levels of CPS-specific IgG that was opsonophagocytic for all serotypes tested. Opsonophagocytic titers, expressed as reciprocal dilns. resulting in 50% killing using HL-60 cells, ranged from 100 to 30000, depending on the serotype and formulation. In general, the lower dose and tetravalent formulations yielded the best responses for all serotypes (i.e., either equivalent or better than the higher dose and monovalent formulations). The PLD conjugates were also generally equivalent to or better in CPS-specific responses than the TT conjugates. In particular, both the PLD conjugate and the tetravalent formulations induced responses for type 23F CPS that were approx. an order of magnitude greater than that of the corresponding TT conjugate and monovalent formulations. In addition, all the

PLD conjugates elicited high levels of pneumolysin-specific IgG which were shown to neutralize pneumolysin-induced hemolytic activity in vitro. As a result of these findings, PLD appears to provide an advantageous alternative to conventional carrier proteins for pneumococcal multivalent CPS conjugate vaccines.

AN 1998:644179 HCAPLUS <<LOGINID::20081124>>
DN 130:64887
TI Multivalent pneumococcal capsular polysaccharide conjugate vaccines employing genetically detoxified pneumolysin as a carrier protein
AU Michon, Francis; Fusco, Peter C.; Minetti, Conceicao A. S. A.; Laude-Sharp, Maryline; Uitz, Catherine; Huang, Chun-Hsien; D'Ambra, Anello J.; Moore, Samuel; Remeta, David P.; Heron, Iver; Blake, M. S.
CS North American Vaccine, Inc., Beltsville, MD, 21046, USA
SO Vaccine (1998), 16(18), 1732-1741
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier Science Ltd.
DT Journal
LA English
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Streptococcus pneumoniae type 14 polysaccharide-conjugate vaccines: length stabilization of opsonophagocytic conformational polysaccharide epitopes
AB A simple and convenient method was developed for the preparation of Streptococcus pneumoniae type 14 polysaccharide (Pn14PS)-tetanus toxoid (TT) conjugate vaccines, using terminally linked Pn14PS fragments of different lengths. Native Pn14PS was simultaneously depolymd. and activated for conjugation by partial N-deacetylation followed by nitrous acid deamination which yielded fragments (1.4 to 150.0 kDa) having a free aldehyde at the reducing end. These were then conjugated to TT through their terminal aldehydic groups, using the reductive amination procedure. All of the above conjugates, when injected in rabbits, induced anti-Pn14PS antibodies, whereas the native Pn14PS did not. The amts. of anti-Pn14PS antibodies elicited by these conjugates, as determined by ELISA, followed a trend with conjugates containing the highest-mol.-weight Pn14PS eliciting the highest titers. The same trend was also observed in the ability of the antibodies to opsonize and kill live type 14 pneumococci, although the increase in opsonophagocytic activity was more pronounced and did not correlate linearly with increases in antibody titer. Competitive inhibition of the binding of different conjugate antisera to the native Pn14PS, using Pn14PS fragments as inhibitors, established that the conjugates induced antibodies with specificities for different lengths of Pn14PS beginning at 2 repeating units (RU). It was also established, both immunol. and antigenically, that at least 4 RU of Pn14PS were required to form an extended conformational epitope and that approx. 22 RU of Pn14PS were required to duplicate the same epitope on the same saccharide chain. The conformational epitope was found to be essential for the induction of antibodies with high opsonophagocytic activity and that augmentation of opsonophagocytic activity was also dependent on further chain extension.
AN 1998:363136 HCAPLUS <<LOGINID::20081124>>
DN 129:121330
OREF 129:24848h,24849a
TI Streptococcus pneumoniae type 14 polysaccharide-conjugate vaccines: length stabilization of opsonophagocytic conformational polysaccharide epitopes
AU Laferriere, Craig A.; Sood, Ramesh K.; De Muys, Jean-Marc; Michon, Francis; Jennings, Harold J.

CS Institute for Biological Sciences, National Research Council of Canada, Ottawa, ON, K1A 0R6, Can.
SO Infection and Immunity (1998), 66(6), 2441-2446
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Structural properties of group B streptococcal type III polysaccharide conjugate vaccines that influence immunogenicity and efficacy
AB In this study, we tested the hypothesis that the immunogenicity and protective efficacy of polysaccharide-protein conjugate vaccines are influenced by three variables: (i) mol. size of the conjugate, (ii) mol. size of the polysaccharide used for conjugation, and (iii) extent of polysaccharide-to-protein crosslinking. Type III group B Streptococcus capsular polysaccharide was linked by reductive amination at multiple sites to tetanus toxoid to create a polysaccharide-protein conjugate (III-TT). A single lot of III-TT was fractionated into small, medium, and large Mr pools. Whereas all three conferred protection in a maternal immunization-neonatal challenge model in mice, the smallest Mr conjugate evoked less polysaccharide-specific IgG than the two larger Mr conjugates. To test whether the mol. size of the polysaccharide used for conjugation also affected the immunogenicity of the conjugate, vaccines were synthesized using capsular polysaccharides with Mrs of 38,000, 105,000, and 349,000. Polysaccharide-specific IgG responses in mice increased with the Mr of the polysaccharides, and protective efficacy was lower for the smallest polysaccharide conjugate compared to the other two vaccines. Immunogenicity testing of a series of vaccines prepared with different degrees of polysaccharide -to-protein crosslinking demonstrated higher polysaccharide -specific antibody responses as the extent of crosslinking increased. However, opsonic activity was greatest in mouse antiserum raised to a moderately cross-linked conjugate, suggesting that some antibodies evoked by highly cross-linked conjugates were directed to a nonprotective epitope. We conclude that conjugate size, polysaccharide size, and degree of polysaccharide-protein crosslinking influence the immunogenicity and protective efficacy of III-TT conjugate vaccines.
AN 1998:296952 HCAPLUS <<LOGINID::20081124>>
DN 129:53190
OREF 129:11083a
TI Structural properties of group B streptococcal type III polysaccharide conjugate vaccines that influence immunogenicity and efficacy
AU Wessels, Michael R.; Paoletti, Lawrence C.; Guttormsen, Hilde-Kari; Michon, Francis; D'ambra, Anello J.; Kasper, Dennis L.
CS Channing Laboratory, Brigham and Women's Hospital, Boston, MA, 02115, USA
SO Infection and Immunity (1998), 66(5), 2186-2192
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Meningococcal vaccine development: a novel approach

AB Neisseria meningitidis is a major world-wide cause of meningitis. Effective capsular polysaccharide (CPS) vaccines, that elicit CPS-specific bactericidal (BC) antibodies, were previously developed and licensed to protect against meningococcal disease. However, due to their T-cell independent character, CPS vaccines are useless in infants and do not provide immunol. memory or long-lasting protection in adults. CPS-protein conjugate vaccines are being developed to improve and broaden vaccine efficacy by creating T-cell dependent antigens. However, group B meningococci (GBM) are responsible for nearly half of meningococcal disease and possess a CPS, composed of polysialic acid, that is poorly immunogenic. N-propionyl (NPr) modification of the GBM polysaccharide (GBMP) has enhanced its immunogenicity, but BC antibodies are not induced at high levels, even when conjugated to conventional protein carriers, unless adjuvants stronger than aluminum hydroxide are used. We have chosen to couple the NPr-GBMP by reductive amination to a recombinant GBM class 3 porin (rProB), which we have shown to modulate the immune response in animals towards the production of CPS-specific BC antibodies. We have also combined this conjugate with similar CPS-rProB conjugates for groups A and C meningococci to form a trivalent A/B/C conjugate vaccine. This trivalent meningococcal vaccine has been shown to be safe and highly immunogenic in mice and non human primates, generating CPS-specific BC antibodies for each of the 3 major serogroups, which should provide world-wide protection against meningococcal disease.
AN 1998:97206 HCAPLUS <<LOGINID::20081124>>
DN 128:203874
OREF 128:40311a,40314a
TI Meningococcal vaccine development: a novel approach
AU Fusco, Peter C.; Blake, M. S.; Michon, Francis
CS North American Vaccine, Inc., Beltsville, MD, 20705, USA
SO Expert Opinion on Investigational Drugs (1998), 7(2), 245-252
CODEN: EOIDER; ISSN: 0967-8298
PB Ashley Publications
DT Journal
LA English
RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Combination conjugate vaccines against multiple serotypes of group B streptococci
AB Immunity to group B streptococci (GBS) is correlated to the presence of antibodies to the capsular polysaccharides (CPS). Conjugation of type III CPS to the beta C protein results in high IgG titer to both components. Here, the authors have examined the immunogenicity of capsular polysaccharides of four GBS serotypes (Ia, Ib, II, III) after conjugation to the beta C protein by reductive amination.
AN 1998:3712 HCAPLUS <<LOGINID::20081124>>
DN 128:74010
OREF 128:14447a,14450a
TI Combination conjugate vaccines against multiple serotypes of group B streptococci
AU Michon, F.; Fusco, P. C.; D'Ambra, A. J.; Laude-Sharp, M.; Long-Rowe, K.; Blake, S.; Tai, J. Y.
CS North American Vaccine, Inc., Beltsville, MD, USA
SO Advances in Experimental Medicine and Biology (1997), 418(Streptococci and the Host), 847-850
CODEN: AEMBAP; ISSN: 0065-2598
PB Plenum Publishing Corp.
DT Journal

LA English
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI The synthesis of Streptococcus pneumoniae polysaccharide-tetanus toxoid conjugates and the effect of chain length on immunogenicity
AB To study the relationship between length of pneumococcal polysaccharide and immunol. performance in rabbits we took well defined fragments of the capsular polysaccharides of S. pneumoniae types 3, 6A, 18C, 19F and 23F and pneumococcal C-polysaccharide and linked them terminally by reductive amination to tetanus toxoid. Contrary to other reports we found little variation in antibody titers with increasing length. In general the opsonophagocytic titers determined using activated HL60 cells and rabbit peritoneal cells correlated well with the antibody titers except for that of type 3, which despite the presence of high polysaccharide antibody titers gave unexpectedly low opsonophagocytic titers. The C-polysaccharide-conjugate was also immunogenic when injected in both rabbits and mice but gave low opsonophagocytic titers. It was demonstrated that opsonophagocytosis was solely dependent on the presence of phosphorylcholine-specific antibody and that the induction of these antibodies was species dependent.
AN 1997:223134 HCAPLUS <<LOGINID::20081124>>
DN 126:249943
OREF 126:48319a,48322a
TI The synthesis of Streptococcus pneumoniae polysaccharide-tetanus toxoid conjugates and the effect of chain length on immunogenicity
AU Laferriere, Craig A.; Sood, Ramesh K.; De Muys, Jean-Marc; Michon, Francis; Jennings, Harold J.
CS North American Vaccine Laboratory, National Research Council of Canada, Ottawa, ON, Can.
SO Vaccine (1997), 15(2), 179-186
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier
DT Journal
LA English

L14 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Neonatal mouse protection against infection with multiple group B streptococcal (GBS) serotypes by maternal immunization with a tetravalent GBS polysaccharide-tetanus toxoid conjugate vaccine
AB Most cases of neonatal sepsis and meningitis caused by group B streptococci (GBS) are attributable to one of four major capsular serotypes: Ia, Ib, II, or III. Because resistance to infection with GBS has been correlated with the presence of serum antibodies to the type-specific capsular polysaccharides in both exptl. animals and human neonates, efforts have been made to elicit protective immunity with GBS capsular polysaccharide vaccines. However, the GBS capsular polysaccharides alone are not highly immunogenic in either animal or human volunteers. Therefore, the authors and other investigators have attempted to enhance immunogenicity by coupling individual capsular polysaccharides to a carrier protein. Here the authors report the synthesis and immunogenicity in rabbits of a GBS type Ib polysaccharide-tetanus toxoid vaccine prepared by the direct, covalent attachment of tetanus toxoid to a selected number of sialic acid residues on the type-specific polysaccharide. In addition, the Ib polysaccharide-tetanus toxoid conjugate vaccine was combined with similar tetanus toxoid conjugates of GBS type Ia, II, and III polysaccharides to form a tetravalent GBS conjugate vaccine. Protective efficacy of the GBS tetravalent conjugate vaccine was

demonstrated in a mouse maternal immunization-neonatal challenge model of GBS infection. The results support testing in human subjects of a multivalent GBS conjugate vaccine of this design, with the eventual goal of protecting newborns against GBS infection.
AN 1994:555116 HCAPLUS <<LOGINID::20081124>>
DN 121:155116
OREF 121:28049a,28052a
TI Neonatal mouse protection against infection with multiple group B streptococcal (GBS) serotypes by maternal immunization with a tetravalent GBS polysaccharide-tetanus toxoid conjugate vaccine
AU Paoletti, Lawrence; Wessels, Michael R.; Rodewald, Ariane K.; Shroff, Amy A.; Jennings, Harold J.; Kasper, Dennis L.
CS Channing Laboratory, Brigham and Women's Hospital, Boston, MA, 02115, USA
SO Infection and Immunity (1994), 62(8), 3236-43
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English

L14 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Maternal immunization of mice with group B streptococcal type III polysaccharide-beta C protein conjugate elicits protective antibody to multiple serotypes
AB Group B streptococcal infection is major cause of neonatal mortality. Antibody to the capsular polysaccharide protects against invasive neonatal disease, but immunization with capsular polysaccharides fails to elicit protective antibody in many recipients. Conjugation of the polysaccharide to tetanus toxoid has been shown to increase immune response to the polysaccharide. In animal models, C proteins of group B streptococci are also protective determinants. The authors examined the ability of the beta C protein to serve in the dual role of carrier for the polysaccharide and protective immunogen. Type III polysaccharide was covalently coupled to beta C protein by reductive amination. Immunization of rabbits with the polysaccharide-protein conjugate elicited high titers of antibody to both components, and the serum induced opsonophagocytic killing of type III, Ia/C, and Ib/C strains of group B streptococci. Female mice were immunized with the conjugate vaccine and then bred; 93% of neonatal pups born to these dams vaccinated with conjugate survived type III group B streptococcal challenge and 76% survived type Ia/C challenge, compared with 3% and 8% survival, resp., in controls. The beta C protein acted as an effective carrier for the type III polysaccharide while simultaneously inducing protective immunity against beta C protein-containing strains of group B streptococci.
AN 1994:531894 HCAPLUS <<LOGINID::20081124>>
DN 121:131894
OREF 121:23825a,23828a
TI Maternal immunization of mice with group B streptococcal type III polysaccharide-beta C protein conjugate elicits protective antibody to multiple serotypes
AU Madoff, Lawrence C.; Paoletti, Lawrence C.; Tai, Joseph Y.; Kasper, Dennis L.
CS Channing Laboratory, Brigham and Women's Hospital, Boston, MA, 02115, USA
SO Journal of Clinical Investigation (1994), 94(1), 286-92
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English

L14 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Group B Streptococcus type II polysaccharide-tetanus toxoid conjugate vaccine
AB Group B streptococci (GBS) are the most common cause of bacterial sepsis

and meningitis in neonates in the United States. Although the capsular polysaccharide of GBS is an important virulence factor, it is variably immunogenic in humans. The authors increased the immunogenicity of GBS type II polysaccharide by coupling it to tetanus toxoid (TT). Like other GBS capsular polysaccharides, the type II polysaccharide has side chains terminating in sialic acid. Controlled periodate oxidation of native II polysaccharide resulted in the conversion of 7% of sialic acid residues to an analog of sialic acid, 5-acetamido-3,5-dideoxy-D-galactosyloctulosonic acid. TT was conjugated to free aldehyde groups created on the oxidized sialic acid residues by reductive amination. Serum from rabbits vaccinated with type II-TT conjugate (II-TT) vaccine contained antibodies specific to type II polysaccharide as well as to TT, whereas rabbits vaccinated with uncoupled native type II polysaccharide failed to produce a type-specific antibody response. Antibodies elicited by II-TT vaccine were serotype specific and mediated phagocytosis and killing in vitro of type II GBS by human peripheral blood leukocytes. Serum from rabbits vaccinated with II-TT vaccine provided 100% protection in a mouse model of GBS type II infection. Antibodies induced by II-TT vaccine were specific for the native but not desialylated type II polysaccharide, suggesting that an important antigenic epitope of II-TT vaccine was dependent on the presence of sialic acid. Therefore, the coupling strategy which selectively modified a portion of the sialic acid residues of type II polysaccharide before coupling the polysaccharide to TT preserved the epitope essential to protective immunity and enhanced the immunogenicity of the polysaccharide.

AN 1993:78831 HCAPLUS <<LOGINID::20081124>>
DN 118:78831
OREF 118:13815a,13818a
TI Group B Streptococcus type II polysaccharide-tetanus toxoid conjugate vaccine
AU Paoletti, Lawrence C.; Wessels, Michael R.; Michon, Francis; DiFabio, Jose; Jennings, Harold J.; Kasper, Dennis L.
CS Channing Lab., Brigham Women's Hosp., Boston, MA, 02115, USA
SO Infection and Immunity (1992), 60(10), 4009-14
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English

L14 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Oligosaccharide conjugate vaccines
AB An improved method is provided for producing oligosaccharide conjugate vaccines. The method comprises (1) reacting an oligosaccharide having a terminal reducing group with diaminoethane in the presence of pyridine borane such that reductive amination occurs; (2) reacting the aminated oligosaccharide with a mol. having 2 functional groups, 1 of which can react with the terminal group of the activated oligosaccharide and the other of which can react with a carrier protein; and (3) reacting the activated oligosaccharide product of 2 with a carrier protein to form a conjugate. The bifunctional mol. is e.g. a diester of adipic acid or of succinic acid. The process of the invention permits the efficient synthesis of glycoconjugates at production rates significantly faster than currently employed methods. Capsular polysaccharide of Streptococcus pneumoniae (e.g. S. pneumoniae type 6A polysaccharide) was hydrolyzed, and the resulting oligosaccharide haptens were treated with diaminomethane, pyridine borane, and then with the succinimidyl diester of succinic (or adipic) acid. The activated oligosaccharides were conjugated to Corynebacterium diphtheriae CRM197 protein, and the immunogenicity of the glycoconjugates was determined The immune response to the glycoconjugates was monospecific and homogeneous.

AN 1992:253939 HCAPLUS <<LOGINID::20081124>>
DN 116:253939
OREF 116:43051a,43054a
TI Oligosaccharide conjugate vaccines
IN Porro, Massimo
PA American Cyanamid Co., USA
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	EP 477508	A1	19920401	EP 1991-113163	19910806	<--
	EP 477508	B1	19950712			
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE					
	US 5153312	A	19921006	US 1990-590649	19900928	<--
	IL 99119	A	19961114	IL 1991-99119	19910807	<--
	JP 06340550	A	19941213	JP 1991-270517	19910924	<--
	JP 3027452	B2	20000404			
	CA 2052323	A1	19920329	CA 1991-2052323	19910926	<--
	CA 2052323	C	20010417			
	FI 9104564	A	19920329	FI 1991-4564	19910927	<--
	FI 104046	B1	19991115			
	HU 58529	A2	19920330	HU 1991-3103	19910927	<--
	HU 211210	B	19951128			
	NO 9103812	A	19920330	NO 1991-3812	19910927	<--
	NO 300759	B1	19970721			
	AU 9184833	A	19920402	AU 1991-84833	19910927	<--
	AU 634663	B2	19930225			
	CN 1060294	A	19920415	CN 1991-109424	19910927	<--
	CN 1034054	C	19970219			
	ZA 9107771	A	19920624	ZA 1991-7771	19910927	<--
	PL 169926	B1	19960930	PL 1991-291855	19910927	<--
	SK 280112	B6	19990806	SK 1991-2969	19910927	<--
	KR 217317	B1	19991001	KR 1991-16912	19910927	<--
	CZ 285650	B6	19991013	CZ 1991-2969	19910927	<--
	US 5306492	A	19940426	US 1992-921678	19920730	<--
PRAI	US 1990-590649	A	19900928	<--		

L14 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI An oligosaccharide-tetanus toxoid conjugate vaccine against type III group B Streptococcus
AB An oligosaccharide-tetanus toxoid conjugate vaccine was developed against type III group B Streptococcus. Purified group B streptococcal type III capsular polysaccharide was depolymd. by enzymic digestion using endo-β-galactosidase produced by Citrobacter freundii. Following enzymic digestion, oligosaccharides were fractionated by gel filtration chromatog. on Sephadex G-75. An oligosaccharide pool of average mol. weight 14,500 (corresponding to 13.6 repeating units of the type III polysaccharide) was used for conjugation to tetanus toxoid. Tetanus toxoid was covalently coupled via a synthetic spacer mol. to the reducing end of the oligosaccharide by reductive amination. The oligosaccharide-tetanus toxoid conjugate elicited type III-specific anticapsular antibodies (measured in ELISA) in 3 out of 3 rabbits whereas the unconjugated native type III polysaccharide was nonimmunogenic. Antiserum from rabbits vaccinated with the oligosaccharide-protein conjugate protected mice against lethal challenge with live group B streptococci (16 out of 16 mice survived) and opsonized group B streptococci for phagocytosis in vitro. No protection was

conferred by preimmune serum nor by serum from rabbits vaccinated with unconjugated native type III polysaccharide. An oligosaccharide-protein conjugate vaccine of this design may prove to be an effective immunogen for protection against group B streptococcal infection in humans. In addition, the approach to vaccine design utilized in these studies will facilitate further definition of the structural parameters that determine immune response to glycoconjugate vaccines.
AN 1991:4512 HCAPLUS <<LOGINID::20081124>>
DN 114:4512
OREF 114:911a,914a
TI An oligosaccharide-tetanus toxoid conjugate vaccine against type III group B Streptococcus
AU Paoletti, Lawrence C.; Kasper, Dennis L.; Michon, Francis; DiFabio, Jose; Holme, Kevin; Jennings, Harold J.; Wessels, Michael R.
CS Channing Lab., Brigham and Women's Hosp., Boston, MA, 02115, USA
SO Journal of Biological Chemistry (1990), 265(30), 18278-83
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L14 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Immunogenicity in animals of a polysaccharide-protein conjugate vaccine against type III group B Streptococcus
AB The native capsular polysaccharide of type III group B Streptococcus elicits a specific antibody response in only 60% of nonimmune human subjects. To enhance the immunogenicity of this polysaccharide, the type III polysaccharide was coupled to tetanus toxoid. Prior to coupling, aldehyde groups were introduced on the polysaccharide by controlled periodate oxidation, resulting in the conversion of 25% of the sialic acid residues of the polysaccharide to residues of the 8-carbon analog of sialic acid, 5-acetamido-3,5-dideoxy-D-galactosyloctulosonic acid. Tetanus toxoid was conjugated to the polysaccharide by reductive amination, via the free aldehyde groups present on the partially oxidized sialic acid residues. Rabbits vaccinated with the conjugate vaccine produced IgG antibodies that reacted with the native type III group B streptococcal polysaccharide, while rabbits immunized with the unconjugated type III polysaccharide failed to respond. Sera from animals receiving conjugate vaccine opsonized type III group B streptococci for phagocytic killing by human peripheral blood leukocytes, and protected mice against lethal challenge with live type III group B streptococci. The results suggest that this method of conjugation to a carrier protein may be a useful strategy to improve the immunogenicity of the type III group B Streptococcus polysaccharide in human subjects.
AN 1990:629149 HCAPLUS <<LOGINID::20081124>>
DN 113:229149
OREF 113:38645a,38648a
TI Immunogenicity in animals of a polysaccharide-protein conjugate vaccine against type III group B Streptococcus
AU Wessels, Michael R.; Paoletti, Lawrence C.; Kasper, Dennis L.; DiFabio, Jose L.; Michon, Francis; Holme, Kevin; Jennings, Harold J.
CS Channing Lab., Brigham and Women's Hosp., Boston, MA, 02115, USA
SO Journal of Clinical Investigation (1990), 86(5), 1428-33
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English

L14 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI GLC-MS of N-(1-deoxyalditol-1-yl)octadecylamine derivatives in the analysis of methanolysates of neoglycolipids obtained by reductive

amination
AB Hydrophobic conjugates of a series of aldoses have been prepared by reductive amination with octadecylamine and sodium cyanoborohydride, as model compds. for the anal. of reductively aminated oligosaccharides derived from capsular polysaccharides of Streptococcus pneumoniae. In the context of the methanolysis procedure for sugar anal., GLC and GLC-MS studies were carried out on the N-(1-deoxyalditol-1-yl)octadecylamine derivs. obtained after treatment with methanolic HCl, and subsequent N-acetylation and trimethylsilylation.
AN 1989:420786 HCAPLUS <<LOGINID::20081124>>
DN 111:20786
OREF 111:3590h,3591a
TI GLC-MS of N-(1-deoxyalditol-1-yl)octadecylamine derivatives in the analysis of methanolysates of neoglycolipids obtained by reductive amination
AU Van Dam, Jan E. G.; Maas, Augustinus A. M.; Kamerling, Johannis P.; Vliegenthart, Johannes, F. G.
CS Dep. Bio-Org. Chem., Utrecht Univ., Utrecht, NL-3508 TB, Neth.
SO Carbohydrate Research (1989), 187(1), 25-34
CODEN: CRBRAT; ISSN: 0008-6215
DT Journal
LA English

L14 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Immunogenic conjugates comprising the reductive amination product of bacterial polysaccharide capsule fragments and bacterial toxins or toxoids, especially for human infants
AB Immunogenic conjugates are the reductive amination products of an immunogenic bacterial capsule fragments and a bacterial toxin or toxoid. The conjugates are prepared and used as vaccines for young mammals, including humans, especially infants. The capsular polymer fragment prior to conjugation has ≥1 aldehyde group at each end of the fragment; the final conjugate made with the capsular polymers has a lattice or network structure, and provides extremely high levels of anticapsular polymer antibodies in infants. The capsular polymer of Haemophilus influenzae type b (PRP) Na salt was cleaved with acid and fragments containing 15-34 ribose units were treated with CRM197 (diphtheria toxin analog) in the presence of NaBH3CN to give the PRP-CRM197 conjugate (I) as a multimol. aggregate. In infants from 12-27 mo, the injection of I led to enhanced formation of anti-PRP antibodies as well as antidiphtheria toxoid antibodies.
AN 1988:156458 HCAPLUS <<LOGINID::20081124>>
DN 108:156458
OREF 108:25600h,25601a
TI Immunogenic conjugates comprising the reductive amination product of bacterial polysaccharide capsule fragments and bacterial toxins or toxoids, especially for human infants
IN Anderson, Porter W.; Eby, Ronald John
PA Praxis Biologics, Inc., USA
SO Eur. Pat. Appl., 58 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 245045	A2	19871111	EP 1987-303928	19870501 <--
	EP 245045	A3	19890426		
	EP 245045	B1	19931103		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
	US 4902506	A	19900220	US 1986-859975	19860505 <--

CA	1276109	C	19901113	CA 1987-536090	19870430 <--
WO	8706838	A1	19871119	WO 1987-US1020	19870501 <--
	W: AU, DK, JP				
AU	8773935	A	19871201	AU 1987-73935	19870501 <--
AU	601742	B2	19900920		
JP	01500036	T	19890112	JP 1987-502838	19870501 <--
JP	2559438	B2	19961204		
AT	96676	T	19931115	AT 1987-303928	19870501 <--
ES	2059372	T3	19941116	ES 1987-303928	19870501 <--
JP	08283282	A	19961029	JP 1996-22882	19870501 <--
DK	8800025	A	19880105	DK 1988-25	19880105 <--
DK	175489	B1	20041108		
PRAI US	1986-859975	A	19860505 <--		
US	1981-298102	B2	19810831 <--		
US	1983-511048	A2	19830705 <--		
EP	1987-303928	A	19870501 <--		
JP	1987-502838	A3	19870501 <--		
WO	1987-US1020	A	19870501 <--		

L14 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN

TI Immunogenic conjugates for vaccines against childhood diseases.

AB An immunogenic conjugate comprises the reductive amination product of an immunogenic capsular polymer fragment of 10-30 monomeric units and a reducing end. The fragment is derived from the capsular polymer of a Streptococcus pneumoniae or Haemophilus influenzae bacterium and a bacterial toxin or toxoid. A vaccine containing the conjugates allows active immunization of young mammals against systemic bacterial infections. An immunogenic conjugate comprising diphtheria toxin protein CRM197 and H. influenzae capsular polysaccharide PRPvs fragment (preparation given) was used to immunize children of age 1-2 yr via s.c. injection of a vaccine containing 25mg conjugate in saline (2-3 vaccinations at ≥1 mo. intervals). No toxic reactions were observed, and higher antibody titers were observed with the CRM carrier than without and with secondary vaccination.

AN 1987:561671 HCAPLUS <<LOGINID::20081124>>

DN 107:161671

OREF 107:25889a,25892a

TI Immunogenic conjugates for vaccines against childhood diseases.

IN Anderson, Porter W.

PA USA

SO U.S., 11 pp. Cont.-in-part of U.S. Ser. No. 298,102, abandoned.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4673574	A	19870616	US 1983-511048	19830705 <--
	US 4808700	A	19890228	US 1984-639293	19840810 <--
	US 4762713	A	19880809	US 1985-732200	19850508 <--
	US 4761283	A	19880802	US 1986-845731	19860328 <--
	US 4902506	A	19900220	US 1986-859975	19860505 <--
	US 5097020	A	19920317	US 1989-423081	19891018 <--
	US 5360897	A	19941101	US 1992-819305	19920109 <--
PRAI	US 1981-298102	A2	19810831 <--		
	US 1983-511048	A2	19830705 <--		
	US 1984-628873	A2	19840709 <--		
	US 1986-859975	A1	19860505 <--		
	US 1989-423081	A1	19891018 <--		

L14 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Immunogens consisting of oligosaccharides from the capsule of Haemophilus influenzae type b coupled to diphtheria toxoid or the toxin protein CRM197
AB H. influenzae Type b (Hib) capsular polysaccharide (PRP) was selectively hydrolyzed to reducing oligosaccharides, and the fraction containing 3-10 ribosylribitolphosphate repeating units (VS) was conjugated by reductive amination to diphtheria toxin (DTx), its nontoxic derivative CRM197 (Dcr), or diphtheria toxoid (DTd). Conjugate DTx-VS retained .apprx.1% of native toxicity, which was eliminated by treatment with formalin. Immunization of rabbits with the conjugates elicited antibody (Ab) to PRP and to DTx but not to a model for the linkage determinant. Human adults given single s.c. injections had increases in serum Ab to PRP and in bactericidal activity in vitro; the Ab protected infant rats challenged with Hib. Adults had increases also in Ab to DTd, and these Ab protected rabbits against DTx. A series of 2 injections of the conjugates Dcr-VS and DTd-VS was tested in infants beginning at 19-23 mo of age. Rises in anti-PRP Ab after the primary resembled the rises after PRP vaccine. In contrast to PRP, the conjugates elicited large rises after the secondary vaccinations and a substantial IgG component. Development of bactericidal activity paralleled the rises in anti-PRP Ab. Secondary rises after Dcr-VS were higher than after DTd-VS. In infants 12-16 mo of age, Dcr-VS (but not DTd-VS) elicited strong primary and secondary Ab responses that included IgG and bactericidal activity. Both conjugates produced consistent rises in Ab to DTd.
AN 1985:486144 HCAPLUS <<LOGINID::20081124>>
DN 103:86144
OREF 103:13833a,13836a
TI Immunogens consisting of oligosaccharides from the capsule of Haemophilus influenzae type b coupled to diphtheria toxoid or the toxin protein CRM197
AU Anderson, Porter; Pichichero, Micael E.; Insel, Richard A.
CS Med. Cent., Univ. Rochester, Rochester, NY, 14642, USA
SO Journal of Clinical Investigation (1985), 76(1), 52-9
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English

L14 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Studies on vaccine control and immunogenicity of polysaccharides of Streptococcus pneumoniae
AB An immunoelectrophoretic method was devised for quantitation of 14 polysaccharide components in pneumococcal vaccine and for determination of their stability in the final container. The individual polysaccharide types, 1, 2, 3, 4, 6A, 8, 9N, 12F, 18C, 19F, 23F, and 25 (Danish nomenclature), were present at 80-123% of the labeled concns. Pneumococcal polysaccharide types 3, 6A, 9N, and 19F, used as representative types, were heated at 37° for 24 h and stored at 4°. The concns. of these polysaccharides remained constant over a 12-mo. period, and the mol. sizes of types 3 and 9N were stable during storage. In contrast, the mol. sizes of types 6A and 1.F declined gradually during storage. Pneumococcal type 19F polysaccharide was conjugated to various proteins, i.e., bovine serum albumin, human Ig, and pneumococcal R61 cell wall protein, by reductive amination. Immunization of mice with 19F polysaccharide -protein conjugates increased formation of antibody. Young mice exposed to pneumococcal type 19F polysaccharide-protein conjugate during gestation and suckling had a greater antibody response than did mice that received no type 19F polysaccharide-protein conjugate while suckling or received the conjugate only when they were 2 wk old.
AN 1981:538439 HCAPLUS <<LOGINID::20081124>>
DN 95:138439

OREF 95:23086h,23087a
TI Studies on vaccine control and immunogenicity of polysaccharides of Streptococcus pneumoniae
AU Lee, Chi-Jen; Lin, Kuei-Tang
CS Div. Bacterial Prod., Food and Drug Adm., Bethesda, MD, USA
SO Reviews of Infectious Diseases (1981), 3(Suppl.), 51-60
CODEN: RINDDG; ISSN: 0162-0886
DT Journal
LA English

L14 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2008 ACS on STN
TI Preparation and immunological uses of radio-iodinated oligosaccharide derivatives. I. Preparation of iodine-125-labeled oligosaccharide derivatives with the aid of 3-(4-hydroxyphenyl)propionic acid N-hydroxysuccinimide ester
AB 125I-labeled oligosaccharides were prepared by combining acylation and iodination in a 1-step procedure by successive addition of the ester, 3-(4-hydroxyphenyl)propionic acid N-hydroxysuccinimide ester (I), and 125I--chloramine T to the aminoalditol formed by reductive amination of the oligosaccharide. Thus, the oligosaccharide, NaCNBH3, and NH4OAc in MeOH-H2O (2:1) were refluxed for 6 h or stirred at 37° for 6 days; the resulting 1-amino-1-deoxy alditol was separated by high-voltage electrophoresis with .apprx.30% yield of theor. A solution of I and the aminoalditol in borate buffer, pH 8.5 was kept at 0° for 15 min, then carrier-free Na125I solution was added, followed by chloramine T in H2O (at room temperature). After 5 min the reaction was terminated by addition of Na2S2O5 followed by chromatog. on Sephadex G 25 or Dowex AG 1 + 2, Cl- form. The efficiency of radioiodination was 30%-75%, depending on the compound The immunoreactivity of the derivs. was assessed by using equilibrium dialysis and the Farr assay. 125I-labeled derivs. were prepared from isomaltotetrose, α-nigerosyl-1,3-nigerose, and the monomeric and dimeric repeating units of Klebsiella pneumoniae capsular polysaccharide. Derivs. of the 1st 2 compds. listed were virtually carrier-free with an extremely high sp. activity of .apprx.2 mCi/μg.
AN 1977:167377 HCAPLUS <<LOGINID::20081124>>
DN 86:167377
OREF 86:26281a,26284a
TI Preparation and immunological uses of radio-iodinated oligosaccharide derivatives. I. Preparation of iodine-125-labeled oligosaccharide derivatives with the aid of 3-(4-hydroxyphenyl)propionic acid N-hydroxysuccinimide ester
AU Himmelspach, K.; Geyer, H.; Hoyer, G.; Schepers, G.
CS Max-Planck-Inst. Immunbiol., Freiburg/Br., Fed. Rep. Ger.
SO FEBS Letters (1977), 75(1), 154-8
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English